REMARKS/ARGUMENTS

This Amendment is in response to the Final Office Action mailed November 14, 2008. Before this Amendment, claims 1-3, 5-7, and 9-11 were pending in this application. In this Amendment, claims 1, 5, 7, and 9-11 have been amended, no claims are canceled, and no new claims are presented. After entry of this Amendment, which is respectfully requested, claims 1-3, 5-7, and 9-11 will still be pending. Reconsideration of the rejected claims is respectfully requested.

I. CLAIM REJECTIONS UNDER 35 U.S.C. § 112 ¶ 2

The Office Action rejected all pending claims (claims 1-3, 5-7, and 9-11) under 35 U.S.C. § 112 paragraph 2 for indefiniteness as allegedly failing to particularly point out and distinctly claim the subject matter of the invention.

The Office Action alleged that the relationship between "demand forecast information" and "a computation[al] demand" was unclear in claim 9. Although Applicants respectfully disagree with this characterization, the claims have been amended to no longer recite "a computational demand" so as to expedite prosecution of the subject matter in the claims.

The Office Action stated that "for each computer server of said provided computer servers, allocating the computer server [each one of the plurality of provided computer servers]" (brackets added) in claim 9 was vague. Applicants note that the text in the brackets was deleted by a strikethrough in the previous office action and thus was not part of the claim. Therefore, the rejection was made in error. However, the surrounding text has been deleted in this Amendment, rendering the rejection moot.

The Office Action alleged that it was not clear how the ending step in claim 9 related to previous steps or how it achieved the scope of the claim. Although Applicants disagree, the offending text has been deleted and/or amended so as to expedite prosecution of the patentable subject matter in the claims. Therefore, the rejection is moot.

Independent claims 1 and 5 were rejected on similar grounds as claim 9 because they allegedly appeared to have the same claims and scopes as in claim 9 (Office Action p.5).

Applicants strongly disagree that claims 1 and 5 were the same as or shared the same scope as claim 9. Claims 1 and 5 had different limitations directed toward different aspects of the invention. However, certain text in claim 9 that was similar to that quoted above has been deleted from claims 1 and 5, rendering the rejections moot.

For at least the above reasons, Applicants respectfully request withdrawal of the § 112 ¶ 2 rejections of independent claims 1, 5, and 9, and all claims depending therefrom.

II. CLAIM REJECTIONS UNDER 35 U.S.C. § 103

The Office Action rejected all pending claims (claims 1-3, 5-7, and 9-11) under 35 U.S.C. § 103(a) as being unpatentable (obvious) over Wolf et al. (US 6,374,297) (hereinafter "Wolf"). To establish a prima facie case of obviousness, the prior art reference, or references when combined, must teach or suggest all of the claim limitations. Applicants respectfully traverse the rejections because the cited reference is not in the same field as the present application and it fails to teach or suggest all of the claim limitations.

Wolf et al. (US 6,374,297). Wolf is in a different field than the current application. Although they both deal with allocating computing tasks among computer processors, Wolf applies its allocation algorithms to processes that are obviously able to be segregated, *i.e.*, a mix of web sites servicing various customers (*see* Wolf abstract). At the time of the invention, one of ordinary skill in the art would not have applied Wolf's allocation algorithms to interdependent and historically serial tasks, such as predicting consumer demand for products based on historical sales data at retail outlets. However, the inventors realized that a demand forecast tree representing a demand forecast application can be effectively regarded as consisting of sub-trees which can be effectively processed independently from one another (*see* specification p. 2, lines 17-27). Parallelizing demand forecast algorithms based on their tree/sub-tree structure is a novel application of this concept. Thus, the rejection is based on impermissible hindsight reconstruction of the claimed invention from the present description of the invention by selective reference to less than relevant prior art. Wolf's web server allocation algorithms simply do not apply to "allocating to at least two computer servers a demand forecast application, the demand forecast application represented by a demand forecast tree" as recited by

independent claims 1, 5, and 9. For at least these reasons, Applicants respectfully request withdrawal of the § 103 rejection based on Wolf et al.

Claims 1 and 5. Claim 1 is allowable as Wolf does not teach or suggest each and every element of claim 1. For example, claim 1 recites in part:

> determining an **expected computing time** for each branch of the plurality of branches of the demand forecast tree;
>
> allocating each branch of the plurality of branches to a task of a plurality of tasks based on the expected computing time for the branch, such that a **total expected computing time for each task is substantially equal**, wherein the total expected computing time for a task of the plurality of tasks is determined by adding the expected computing time for each branch that is allocated to the task; and
>
> for each task, distributing the task to a computer server of the at least two computer servers and executing the task on the computer server.

(emphasis added). Claim 5, directed to a computer implemented system, recites similar limitations.

Wolf is directed to balancing different web site loads among a pooled web server farm by apportioning copies of web sites and scheduling customers to web servers (Wolf col. 1, lines 50-67 through col. 2, lines 1-41). Although Wolf naturally seeks to shorten response times to customers from its web sites, Wolf does not disclose "determining an **expected computing time**" (emphasis added) for servicing customers. This makes sense, because customers arrive and depart in a relatively unpredictable fashion from web sites and commonly are surfing multiple web sites at once over which their focus and attention changes. Consumer web sites are different than demand forecast applications because web sites are less deterministic and heavily dependent on user interaction, such as the clicking/following of hyperlinks, the selection of multimedia to play, and HTML form gets and posts.

In addition to the above, Wolf also does not allocate based on the expected computing time such that the "**total expected computing time for each task is substantially equal**" (emphasis added) as required by claim 1. A web site would not be very user friendly if it required users to arrive and depart at substantially equal intervals.

Furthermore, it would not have been obvious to one skilled in the art at the time of the invention in light of Wolf to determine expected computing time or allocate based on the expected computing times such that the total expected computing time for each task was substantially equal because human visitors, perhaps especially when surfing the Web, are less than predictable (*see* Wolf col. 2, lines 25-31).

Accordingly, Wolf fails to teach "determin[ing/es] an expected computing time" or allocations such that a "total expected computing time for each task is substantially equal" as recited in claims 1 and 5. Thus, Wolf cannot render claims 1 or 5 obvious. As claims 1 and 5 are allowable, dependent claims 2-3 and 6-7 are also patentable for at least the same rationale.

Claim 9. Claim 9 recites in part:

> determining a number of bottom level nodes for each branch of the plurality of branches of the demand forecast tree;
>
> for each branch, distributing the branch to a computer server of the at least two computer servers **based on the number of bottom level nodes** on the branch and executing the branch on the computer server to compute a demand forecast for the branch; and
>
> summing the computed demand forecasts for each branch to **determine a demand forecast for the single top level node**.

(emphasis added). Support for this is on p. 5, lines 16-30 through p. 6, lines 1-22 of the original specification.

The Office Action asserts that Wolf FIG. 6, along with Wolf col. 15, lines 15-67, discloses determining a computational demand for each branch of the demand forecast tree by determining a number of bottom level nodes comprising each branch (Office Action p. 7, bottom). FIG. 6 has been reproduced below, in which servers 1-13 are represented by nodes, and copies of web sites A-K on the servers are represented by letters A-K.

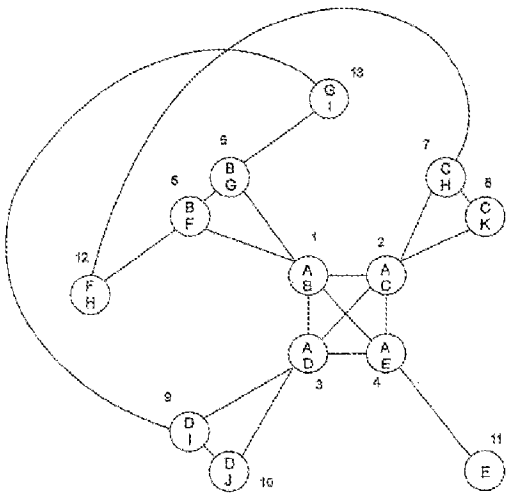


FIG. 6 of Wolf et al. (US 6,374,297)

As apparent from FIG. 6 (and other figures with nodes, FIGS. 1 and 4-5) of Wolf, there are no "bottom level nodes" on which to base distributing branches. Instead, the nodes, which represent servers, are at the same level before assignment. At best, "leaf nodes" are formed when less popular web sites are assigned to the servers (Wolf col. 13, lines 49-50). However, these leaf nodes are formed after the web sites are assigned to the servers. Thus, Wolf does not disclose "distributing the branch to a computer server . . . **based on a number of bottom level nodes**" as recited by claim 9 because there are no bottom level nodes on which to base the distribution.

To put it a different way, each part of the tree shown in FIG. 6 is formed after an assignment to a server. Four copies of the most popular web site A are assigned to servers 1, 2, 3, and 4, "form[ing] the root node of the clique tree" (Wolf. col. 15, lines 15-20). As other web sites B-K are assigned, other branches and parts of the clique tree are formed (*see* Wolf col. 15, lines 20-49). That is, the assignment of web sites A-K to servers 1-13 forms the branches and nodes, not the other way around. Thus, Wolf does not disclose "distributing the branch [of a demand forecast tree] to a computer server . . . based on a number of bottom level nodes" as required by claim 9.

Additionally, Wolf does not "sum[] the computed demand forecasts for each branch to **determine a demand forecast for the single top level node**" (emphasis added).

Again, Wolf is not directed to computing demand forecasts. Furthermore, Wolf's 'nodes' are servers or server clusters (Wolf col. 1, lines 64-67), and thus it would not make sense to sum individual portions of each node branch in Wolf to determine something for a top level node. For example, it would not make sense to sum web traffic on a branch of FIG. 6 of Wolf in order to determine the web traffic of the root node (formed by servers 1-4). The summed web traffic would be for the servers on the branch. Even if one could sum something from each branch, such summations would probably not add up properly for the top level node because some web sites overlap with others on different servers (*i.e.,* "connection copies," Wolf col. 15, lines 25-30).

Because Wolf does not teach or suggest all of the claim limitations, the claim is not rendered unpatentable by the reference. For at least the reasons above, Applicants respectfully request withdrawal of the § 103 rejections of claim 9 and all claims depending therefrom.

III. CLAIM AMENDMENTS

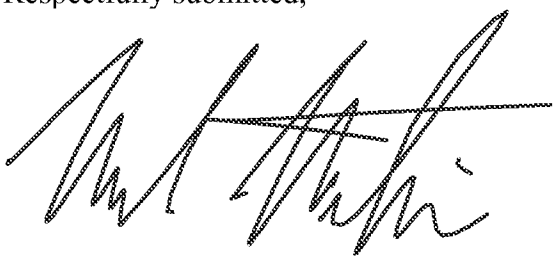
Unless otherwise specified, amendments to the claims are made for purposes of clarity, and are not intended to alter the scope of the claims or limit any equivalents thereof. The amendments are supported by the specification and do not add new matter.

CONCLUSION

In view of the foregoing, Applicants believe all claims now pending in this Application are in condition for allowance and an action to that end is respectfully requested.

If the Examiner believes a telephone conference would expedite prosecution of this application, please telephone the undersigned at 925-817-3135.

Respectfully submitted,



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